CLAIMS:

1.   A processing system comprising a calculation unit (13), a storage device and a system for switching between the storage device and the calculation unit, said processing system being characterized in that:

     - the storage device comprises several banks of registers (21, 22);

5   - the switching system comprises at least one switching device (24) associated with each bank of registers;

     - the calculation unit is able to communicate with at least two banks of registers by means of the associated switching devices.

10 2.   A processing system as claimed in claim 1, characterized in that the calculation unit comprises at least one port and the switching system also comprises a common switching device (27) by means of which the port of the calculation unit can communicate with several registers.

15 3.   A processing system as claimed in any one of claim 1 or 2, characterized in that:

     - a bank of registers stores words of P/N bits, a data item to be communicated being comprised in one or more words, P and N being integral numbers, N being greater than or equal to 2 and P being a multiple of N;

20   - the calculation unit communicates with i registers for reading or writing a data item of iP/N bits, i being an integer between 1 and N.

4.   A processing system as claimed in claim 1, characterized in that the calculation unit comprises at least one port, said port being able to communicate with a single 25 bank of registers.

5.   A processing system as claimed in claim 4, characterized in that each bank of registers stores a data type and the port of the calculation unit is associated with a data type.

6.   An image reproduction processor comprising a processing system as claimed in any one of claims 1 to 5.

7.   A set-top box comprising at least one image reproduction processor as claimed in claim 6.

8.   A device comprising at least one screen intended to display images and an image reproduction processor as claimed in claim 6.

9.   A communication network comprising at least one transmitter able to send signals representing at least one image, a transmission network, a receiver able to receive said signals and an image reproduction processor as claimed in claim 6.